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**Title: JP10064549A2: NONAQUEOUS ELECTROLYTE SECONDARY BATTERY**

**Derwent Title:** Non-aqueous electrolyte for secondary lithium battery - has anode which comprises binder and compound with predetermined enthalpy of fusion and melting as heat absorber [\[Derwent Record\]](#)

**Country:** JP Japan  
**Kind:** A (See also: [JP3480190B2](#) )

**Inventor:** MURAOKA NORIKI;  
 OZAKI YOSHIYUKI;  
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 WATANABE SHOICHIRO;

**Assignee:** MATSUSHITA ELECTRIC IND CO LTD  
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**Published / Filed:** 1998-03-06 / 1996-08-23

**Application Number:** JP1996000222114

**IPC Code:** [H01M 4/62](#); [H01M 4/02](#); [H01M 10/40](#);

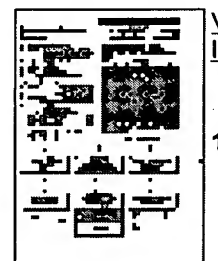
**Priority Number:** 1996-08-23 JP1996000222114

**Abstract:** PROBLEM TO BE SOLVED: To suppress a rise in temperature of a battery caused by short circuit by containing a heat absorbing material of a polymer compound having a specified melting point and heat of fusion and a binder such as styrene - butadiene rubber in a positive electrode of a nonaqueous electrolyte secondary battery.

SOLUTION: A nonaqueous electrolyte secondary battery has a positive electrode using a lithium containing composite oxide as an active material, a negative electrode comprising a carbon material capable of absorbing/releasing lithium, and a nonaqueous electrolyte. A polymer compound having a melting point of 90-130°C and a heat of fusion of 30J/g or more (such as polyethylene, polypropylene, and ethylene - ethyl acrylate - maleic anhydride copolymer) is contained in the positive electrode as a heat absorbing material, and has a globular shape of a mean particle size of 1-12µm, and the added content is 10% or less. As a binder, styrene - butadiene rubber, polyvinylidene fluoride, or polytetrafluoroethylene, etc., is contained in the positive electrode. The nonaqueous electrolyte secondary battery capable of satisfying battery characteristics and suppressing the rise in temperature of the battery when short circuit of the battery arose on the inside and the outside.

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References:

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	<a href="#">US6596430</a>	2003-07-22	Nemoto; Hiroshi	NGK Insulators, Ltd.	<a href="#">Lithium secondary battery and transportation method thereof</a>
	<a href="#">US6586912</a>	2003-07-01	Tsukamoto; Hisashi	Quallion LLC	<a href="#">Method and apparatus for amplifi limiting battery temperature spike</a>
	<a href="#">US6291103</a>	2001-09-18	Park; Yong- Chul	Samsung SDI Co., Ltd.	<a href="#">Positive active material for rechargeable lithium battery</a>

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(11) Publication number: **10064**

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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **08222114**(51) Intl. Cl.: **H01M 4/62 H01M 4/02 H01M 10/40**(22) Application date: **23.08.96**

(30) Priority:	(71) Applicant: <b>MATSUSHITA ELECTRIC IND. LTD</b>
(43) Date of application publication: <b>06.03.98</b>	(72) Inventor: <b>MURAOKA NORIKI OZAKI YOSHIYUKI KOBAYASHI SHIGEO WATANABE SHOICHIRO</b>
(84) Designated contracting states:	(74) Representative:

**(54) NONAQUEOUS  
ELECTROLYTE  
SECONDARY BATTERY**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To suppress a rise in temperature of a battery caused by short circuit by containing a heat absorbing material of a polymer compound having a specified melting point and heat of fusion and a binder such as styrene-butadiene rubber in a positive electrode of a nonaqueous electrolyte secondary battery.

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